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10/538,420

10/11/2006

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EXAMINER

CASCA, FRED A

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/538,420 | Applicant(s) RINNE ET AL. | |
| | Examiner FRED A. CASCA | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment filed on 09/11/2008. Claims 1-24 are pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 112

2. Applicant's amendments overcome the rejection of claims 1-8 under 35 USC 112. Therefore, the rejection of claims 1-8 under 35 USC 112 is withdrawn.

Claim Rejections - 35 USC § 101

3. Applicant's amendments overcome the rejection of claims **16-17 and 20-21** under 35 USC 101. Therefore, the rejection of claims **16-17 and 20-21** under 35 USC 101 is withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-12 and 14-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haverinen et al (US 2005/0195780 A1) in view of Westberg et al (US 2004/0267874 A1).

Referring to claim 1, Haverinen discloses a method of arranging transmission of packet data in a system (abstract and figure 1) comprising a mobile terminal (figure 1-2, “mobile node”), a wireless local network and a mobile network (abstract and figure 1-2 and par. 21, “WLAN”), the method comprising:

signaling, end-to-end service related parameters for communication between the mobile terminal and the wireless network (par. 21, lines 21-24 and fig. 2),

communicating a resource authorization identifier to the mobile terminal (par. 5, 11, “VPN”, “IP address”, “secure network”),

transmitting the resource authorization identifier to the mobile network via the wireless local network (fig. 2, par. 5, 25, “mobile node MN is communicating with the CH by directly accessing the secure network SN or via some third network (e.g. WLAN OR PLMNW)”),

receiving a request for authorization from the mobile network on the basis of the resource authorization identifier (par. 5, 8, 27, “obtain an address from the secure private network”, “Mobile IP foreign or home agent advertisement message”, note that in order to obtain a secure channel in VPN connection via tunneling an authorization is inherently transmitted through the intermediate networks, e.g., a mobile network),

sending an authorization response to bind a communication channel between the mobile terminal and the mobile network (fig. 1-2) to an end-to-end data flow of the mobile terminal wherein the authorization response comprises identification information on the end-to-end data flow and tunnel identification information identifying the tunnel (fig. 1-2 and par. 8, 35-36 and 38, note that the mobile node is able to connect and from a channel with the WLAN and also

with the cellular network. Further the connection between the mobile node and the AP of WLAN/Cellular network is end to end, note that information such as tunnel identification would inherently be provided and used so that a virtual system can be identified, thus a secure channel would be established).

Haverinen does not specifically disclose binding a tunnel between the communication nodes as defined by applicant.

Westberg discloses methods and systems of packet communication between wireless nodes and wired nodes where packet tunnels are formed for specific communications (figure 1 and paragraphs 4, 6, 8, 12, 16-22, "IPSec tunnel", "WLANS", "packet-switched mobile networks", mobile networks such as GPRS networks by encapsulating LAN frames or datagrams to create a tunnel (e.g., an IP/UDP tunnel) from the remote LAN segment through the packet-switched mobile network and the packet-switched fixed network to the fixed LAN segment").

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify Haverinen by incorporating the teachings of Westberg in the format claimed, for the purpose of providing an efficient communication system.

Referring to claim 2, the combination of Haverinen/Westberg discloses the method as claimed in claim 1, and further disclose transmitting at least one filter or gate parameter to the mobile network, the at least one filter or gate parameter is associated with the tunnel, and filtering or gating is arranged in the mobile network to/from the tunnel based on the association (Westberg, paragraph 14, "firewall", "security gateway").

Referring to claim 3, the combination of Haverinen/Westberg discloses the method as claimed in claim 1, and further discloses the same tunnel between the mobile network and a network element of the mobile network and utilizing the data transmission resources of the local network is used for signaling purposes and for user data transmission (Westberg, figure 1 and paragraphs 4, 6, 8, 12, 16-22).

Referring to claim 4, the combination of Haverinen/Westberg discloses the method as claimed in claim 1, and further discloses a first tunnel between the mobile terminal and a first network element of the mobile network is established for end-to-end service parameter signaling, and a second tunnel between the mobile terminal and a second network element of the mobile network is established for user data transmission after the reception of (resource authorization) identifier (Westberg, figure 1 and paragraphs 4, 6, 8, 12, 16-22).

Referring to claim 6, the combination of Haverinen/Westberg discloses the method as claimed in claim 1, and further discloses the mobile network is a 3GPP network offering a packet-switched service comprising at least one network element supporting access, via a WLAN (Westberg, paragraph 31).

Referring to claim 7, the combination of Haverinen/Westberg discloses the method as claimed in claim 1, and further discloses an association is arranged between the tunnel and a 3GPP-WLAN interworking system bearer (Westberg, figure 1 and paragraphs 4, 6, 8, 12, 16-22).

Referring to claim 8, claim 8 defines a system reciting features analogous to the features defined by the method of claim 1 (as rejected above). Thus, the combination of

Haverinen/Ke/Westberg discloses all elements of claim 8 (please see the rejection of claim 1 above).

Referring to claims 9-12 and 14, claims 9-12 and 14 define a network reciting features analogous to the features defined by the method of claims 1-4 and 6 (as rejected above) respectively. Thus, the combination of Haverinen/Westberg discloses all elements of claims 9-12 and 14 (please see the rejection of claims 1-4 and 6 above).

Referring to claims 15-17, claims 15-17 define a terminal and computer products reciting features analogous to the features defined by the method of claim 1 (as rejected above). Thus, the combination of Haverinen/Westberg discloses all elements of claims 15-17 (please see the rejection of claim 1 above).

Referring to claim 18, the combination of Haverinen/Westberg discloses a wireless terminal as claimed in claim 15, and further discloses the tunnel is used for signaling purposes and for user data transmission (Westberg, figure 1 and paragraphs 4, 6, 8, 12, 16-22, “IPSec tunnel”, “datagrams”).

Referring to claim 19, the combination of Haverinen/Westberg discloses a wireless terminal as claimed in claim 15, and further discloses a first tunnel is established for end-to-end service parameter signaling (see rejection of claim 18 above).

The combination does not specifically disclose a second tunnel for user data transmission after the reception of the resource authorization identifier.

It would have been an obvious design choice to modify the combination of Haverinen/Westberg by establishing a second tunnel for user data transmission after the reception of the resource authorization identifier, since the applicant has not disclosed that having such additional tunnel solves any stated problems or is for any particular purpose and it

appears that the establishing of the first tunnel would perform equally well any transmission of user data as suggested by Westberg.

Claims 20-21 recite features analogous to the features of claims 18-19. Thus, the combination of Haverinen/Westberg discloses all elements of claims 20-21 (please see the rejection of claims 18-19 above).

Claim 22 recites features analogous to the features of claim 1. Thus, the combination of Haverinen/Westberg discloses all elements of claims 22 (please see the rejection of claim 1 above).

Claim 23 recites features analogous to the features of claim 21. Thus, the combination of Haverinen/Westberg discloses all elements of claims 23 (please see the rejection of claim 21 above).

Referring to claim 24, the combination of Haverinen/Westberg discloses a wireless system as claimed in claim 22, and further discloses wherein the signaling element is configured to transmit at least one filter or gate parameter to the wireless network, wherein the at least one filter or gate parameter is associated with the tunnel (figure 1 and paragraphs 4, 6, 8, 12, 16-22, "IPSec tunnel", note that an IPSec tunnel inherently uses a filter or gate to filter out packets that don't meet an access requirement).

6. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haverinen et al (US 2005/0195780 A1) in view of Westberg et al (US 2004/0267874 A1) and further in view of Oba et al (US 2005/0163078).

Referring to claims 5 and 13, the combination of Haverinen/Westberg discloses the method and network of claims 1 and 9.

The combination does not specifically disclose the tunnel between the mobile terminal and the mobile network is an IPSec tunnel, whereby the tunnel is established by utilizing an IKE (Internet Key Exchange) protocol.

In the field of endeavor, Oba discloses the tunnel between the mobile terminal and the mobile network is an IPSec tunnel, whereby the tunnel is established by utilizing an IKE (Internet Key Exchange) protocol ("IPsec tunnel for the new subnet is established by running IKE or IKEv2 over the latter IPsec tunnel").

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the combination by incorporating the teachings of Oba as claimed, for the purpose of providing a Multicast/Broadcast Traffic system and taking advantage of an additional Firewalls/Intrusion Detection system, and thus providing a securer network.

Response to Arguments

7. Applicant's arguments with respect to claims 1-24 have been considered but are they are not persuasive.

In response to arguments that Haverinen does not disclose "transmitting the resource authorization identifier to the mobile network via the wireless local network," the examiner respectfully disagrees. Haverinen discloses that a mobile terminal establishes a secure communication channel with a network via a third network. In order to establish a secure network an authentication has to be performed as required in a VPN network (see par. 11).

"Resource authorization identifier" is the authentication code that has to be transmitted in establishing the secure connection.

In response to arguments with respect to "authorization response," the examiner asserts that in Haverinen's system of providing a VPN connection an authorization response has to be sent to satisfy the authentication procedure and therefore establish a secure channel. In response to arguments with respect to "separate signaling element," the arguments are moot since the applicant amended the claim by deleting the limitation "separate signaling element." However, for the sake of clarifying examiner's previous action, the term "separate signaling element" is interpreted as the signal that transmits authentication information.

In response to arguments that Haverinen fails to teach or suggest "sending an authorization response to bind a tunnel between the mobile terminal and the mobile network to an end-to-end data flow of the mobile terminal," the examiner respectfully disagrees. In VPN system of Haverinen an authentication inherently is performed so that only authorized terminals can establish a connection through a secure tunnel (channel). Thus, when the terminal initiates the connection, the terminal sends an authorization request. And only in response to an authorization response the connection is made (to bind a tunnel) between the terminal and the mobile network. The end-to end flow is interpreted as flow of data from mobile terminal to the network.

In response to arguments that there is no teaching or suggestion in Westberg that a tunnel is bound after a signaling element provides an authorization response having end-to-end data flow and tunnel identification information identifying the tunnel, the examiner

respectfully disagrees. Similar to Haverinen, Westberg also disclose secure VPN connections over a secure IPSec tunnel. Thus, authorization request and authorization response is inherent in Westberg.

In response to arguments with respect to claim 15, that Westberg *et al.* does not teach or suggest use of a separate signaling element" (separate from the wireless terminal and mobile network) during the negotiation of end-to-end service related parameters, and ... transmit the resource authorization identifier to the mobile network by using the tunnel." the examiner asserts that the features upon which the applicant relies (e.g., separate from the wireless terminal and mobile network) are not cited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *See in re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)*. Further, the term "separate signaling element" is interpreted as the signal that transmits authentication information. The specification or the claim does not describe signaling element in clear form.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ke et al (2003/0041266 A1) discloses that in order to have a secure channel, information such as tunnel identification would be provided and used so that a virtual system can be identified, thus a secure channel would be established (par. 52).

9. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/VINCENT P. HARPER/

Supervisory Patent Examiner, Art Unit 2617